PATENT ABSTRACTS OF JAPAN

(51)Int.Cl.   H04N 7/173
                                     H04N 5/445
                                     H04N 5/7826

(54) DEVICE AND METHOD FOR NOTIFYING BROADCASTING

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a broadcast-
notifying device which allows a use to surely view a
desired program.
SOLUTION: This broadcast-notifying device is provided
with an electronic program table generating mean which
generates an electronic program table on the basis of
the broadcasting schedule of programs and a
transmitting means, which transmits broadcasting
notification notifying a user of the broadcasting start of
a desired broadcasting program of the user, on the basis
of the information of user's desired broadcasting
program designated by using the electronic program
table.
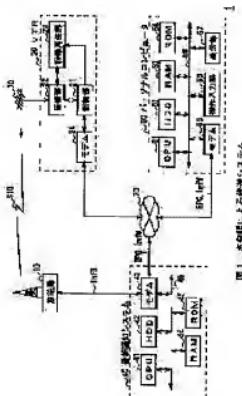
CLAIMS

[Claim(s)]
[Claim 1]A broadcast notifying device comprising:
An electronic program guide creating means which generates an electronic program guide based on a broadcast schedule of a program.
A transmitting means which transmits a notice of broadcast which was specified using the above-mentioned electronic program guide, and which notifies a broadcast start of the above-mentioned program wishing viewing and listening to the above-mentioned user based on information on a user's program wishing viewing and listening.

[Claim 2]The broadcast notifying device according to claim 1, wherein the above-mentioned transmitting means transmits the above-mentioned notice of broadcast by transmitting an E-mail to a predetermined mail address.
[Claim 3]The broadcast notifying device according to claim 1, wherein the above-mentioned transmitting means transmits the above-mentioned notice of broadcast by transmitting a message to a predetermined pager.
[Claim 4]The broadcast notifying device according to claim 1, wherein the above-mentioned transmitting means transmits the above-mentioned notice of broadcast by transmitting a message to a predetermined telephone number.
[Claim 5]The broadcast notifying device according to claim 1, wherein the above-mentioned transmitting means transmits a recording command of the above-mentioned program wishing viewing and listening to a predetermined image recording device.
[Claim 6]The broadcast notifying device according to claim 1 when the above-mentioned transmitting means is changed [a broadcast schedule of the above-mentioned program], wherein it transmits a notice of broadcast again according to this.
[Claim 7]A broadcast notifying method comprising:
An electronic program guide generation step which generates an electronic program guide based on a broadcast schedule of a program.
A transmission step which transmits a notice of broadcast which was specified using the above-mentioned

electronic program guide, and which notifies a broadcast start of the above-mentioned program wishing viewing and listening to the above-mentioned user based on information on a user's program wishing viewing and listening.

[Claim 8]The broadcast notifying method according to claim 7, wherein the above-mentioned transmission step transmits the above-mentioned notice of broadcast by transmitting an E-mail to a predetermined mail address.

[Claim 9]The broadcast notifying method according to claim 7, wherein the above-mentioned transmission step transmits the above-mentioned notice of broadcast by transmitting a message to a predetermined pager.

[Claim 10]The broadcast notifying method according to claim 7, wherein the above-mentioned transmission step transmits the above-mentioned notice of broadcast by transmitting a message to a predetermined telephone number.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention is applied to the broadcast notifying device which notifies the broadcast start of a television program, concerning a broadcast notifying device and a broadcast notifying method, and is preferred.
[0002]
[Description of the Prior Art]When a televiewer views and listens to a television program conventionally, a televiewer looks for a desired program using broadcast schedule tables, such as the newspaper TV program column and a television information magazine, first, and memorizes the broadcasting date and channel of a program of the request concerned. And it can view and listen to a desired program by seeing the channel memorized to the memorized broadcasting date.
[0003]
[Problem(s) to be Solved by the Invention]However, there was a problem that he might forget the memorized broadcasting date or a desired program might be overlooked by change of the broadcasting hours by broadcast of an extraordinary program, etc.
[0004]Even if it set up the reservation of picture recording of the videotape recorder based on the broadcasting date and channel which were memorized, there was a problem that the recording of a desired program might go wrong by change of broadcasting hours.
[0005]This invention was made in consideration of the above point, and tends to propose the broadcast notifying device and broadcast notifying method with which a user may enable it to view and listen to a desired program certainly.
[0006]
[Means for Solving the Problem]In [in order to solve this technical problem] this invention, A transmitting means which transmits a notice of broadcast which was specified as an electronic program guide creating means which generates an electronic program guide based on a broadcast schedule of a program using an electronic program guide, and which notifies a broadcast start of a program wishing viewing and listening to a user based on information on a user's program wishing viewing and listening was established.

[0007]By transmitting to a user a notice of broadcast which notifies a broadcast start of a program wishing viewing and listening, the user can view and listen to a desired program certainly.

[0008]

[Embodiment of the Invention]The 1 embodiment of this invention is explained in full detail about a drawing below.

[0009]The broadcasting station 10 which 1 shows the broadcasting system by this invention as a whole, and performs television broadcasting in drawing 1, the videotape recorder which receives and records the television broadcasting concerned via the antenna 70. (Hereafter) This. 20 called VTR, the program information system 40 which generates electronic program guide EPG (Electric Program Guide) of HTML (HyperText Markup Language) form based on the program broadcast schedule supplied from the broadcasting station 10, It comprises the personal computer 50.

[0010]The videotape recorder 20 and the personal computer 50 are connected to the program information system 40 via the Internet 30. The videotape recorder 20 is made as [operate / from the exterior / videotape recorder 20 concerned] while being made as [communicate / with the exterior / it / via the Internet etc.]. Although the explanation top videotape recorder 20 and the personal computer 50 are accepted one and illustrated, respectively, two or more videotape recorders 20 and personal computers 50 are connected to the program information system 40 via the Internet etc. in practice.

[0011]The broadcasting station 10 transmits the television program based on the program broadcast schedule information InfB defined beforehand as the broadcast wave S10.

[0012]The program information system 40, CPU(Central Processing Unit) 41, the hard disk 42, the modem 43, RAM(Randam Access Memory) 44, and ROM(Read Only Memoly) 45 have the composition connected to the bus 46. CPU41 controls the program information system 40 whole by reading the control program stored in ROM45, and developing and performing this to RAM44.

[0013]The program information system 40 acquires the program broadcast schedule information InfB from the broadcasting station 10 via the modem 43, and stores it in the hard disk 42. CPU41 [and] as an electronic program guide creating means, Electronic program guide EPG (Electric Program Guide) of HTML (HyperText Markup Language) form is generated using the program broadcast schedule information InfB, and this is stored in the hard disk 42.

[0014]On the other hand, the personal computer 50 has the composition in which CPU51, the hard disk 52, RAM53, ROM54, the modem 55, the operation input section 56, and the indicator 57 were connected to the bus 58. CPU51 performs various processings by reading the control program stored in the hard disk 52, and developing and performing this to RAM53.

[0015]When using the broadcast interception of calls service by this invention, a user operates the personal computer 50, connects with the program information system 40, displays electronic program guide EPG on the indicator 50, and gets to know the program broadcast schedule of the broadcasting station 10.

[0016]That is, a user inputs the start manipulation of a web browser program using the operation input section 56 first. According to the start manipulation concerned, CPU51 reads a web browser program from the hard disk 52, executes it on RAM53, and displays a browser picture on the indicator 57.

[0017]A user accesses the program information system 40 using a web browser program. Namely, if a user inputs URL (Uniform Resource Locator) of the program information system 40 into the personal computer 50, CPU51 transmits the read-out demand to the program information system 40 via the modem 55 and the Internet 30 according to this. According to the read-out demand from the personal computer 50, the program information system 40 reads electronic program guide EPG from the hard disk 52, and transmits to the personal computer 50. It receives via the modem 55 and the personal computer 50 displays electronic program guide EPG on the indicator 57.

[0018]A user searches a program using electronic program guide EPG displayed on the indicator 57, and specifies the program which plans viewing and listening on electronic program guide EPG. CPU51 transmits each information on the channel of a viewing-and-listening schedule program, broadcast start time, and broadcast finish time to the program information system 40 as the viewing-and-listening schedule program information InfW according to the program specification by a user. The program information system 40 receives the viewing-and-listening schedule program information InfW, and stores it in the hard disk 52.

[0019]Here, the user sets program reporting timing as the program information system 40 beforehand. The program information system 40 is the timing which transmits program notice mail to a user, for example, this program reporting timing can set up arbitrary timing, such as 1 hour before the broadcast start of a viewing-and-listening schedule program, on the morning of the broadcasting day of a viewing-and-listening schedule program.

[0020]Based on the viewing-and-listening schedule program information InfW, CPU41 as a transmitting means is the timing set up by program reporting timing, and transmits the program notice mail which is an E-mail which notifies broadcast of a viewing-and-listening schedule program to the personal computer 50. By receiving this program notice mail with the personal computer 50, the user can check a viewing-and-listening schedule program, and, thereby, can prevent a failure of the viewing-and-listening schedule program concerned to see.

[0021]The program information system 40 repeats acquisition of the program broadcast schedule information InfB from the broadcasting station 10 for every predetermined time interval. And when there is change to the broadcast times of a viewing-and-listening schedule program, based on the changed broadcast times, program notice mail is again transmitted to the personal computer 50. For this reason, also when the broadcast schedule of a program is changed, for example by extension of baseball broadcast, etc., the user can get the program notice mail based on the changed broadcast schedule concerned.

[0022]In this broadcasting system 1, automatic video recording of the desired program can be carried out with the videotape recorder 20 by replying the program notice mail which the user received to the program information system 40.

[0023]That is, a user operates the personal computer 50 and replies the program notice mail transmitted from the program information system 40 to the program information system 40 as it is. CPU41 of the program information system 40 analyzes the replied program notice mail, and transmits the reservation-of-picture-recording command of a viewing-and-listening schedule program to the videotape recorder 20

beforehand registered by the user.

[0024]The videotape recorder 20 has the recording reproduction section 23 which performs record and reproduction of the control section 21 which controls the videotape recorder 20 whole concerned, the receive section 22 which receives the broadcast wave S10 via the antenna 70, and the received broadcast, and the modem 24 which performs communication with the exterior.

[0025]The videotape recorder 20 receives the reservation-of-picture-recording command transmitted from the program information system 40 with the modem 24, and supplies it to the control section 21. The control section 21 controls the recording reproduction section 23 according to a reservation-of-picture-recording command, and records automatically the viewing-and-listening schedule program specified by the user.

[0026]In this case, the personal computer 50 and the videotape recorder 20 may be installed in the distant place, For example, the user can perform program retrieving using the personal computer 50 installed in the company of office, and can perform reservation of picture recording of the videotape recorder 20 installed in the house.

[0027]In the above composition, the program information system 40 acquires the program broadcast schedule information InfB from the broadcasting station 10 for every predetermined time, and generates electronic program guide EPG based on this. A user acquires electronic program guide EPG from the program information system 40 using the personal computer 50, and specifies the program which plans viewing and listening on electronic program guide EPG. CPU51 of the personal computer 50 transmits to the program information system 40 according to the program specification by a user by making each information on the channel of a viewing-and-listening schedule program, broadcast start time, and broadcast finish time into the viewing-and-listening schedule program information InfW.

[0028]Based on the viewing-and-listening schedule program information InfW, CPU41 of the program information system 40 is the timing set up by program reporting timing, and transmits the program notice mail to a user to the personal computer 50. By receiving this program notice mail with the personal computer 50, a user checks a viewing-and-listening schedule program, and can prevent that this forgets to see the viewing-and-listening schedule program concerned.

[0029]If a user replies the received program notice mail to the program information system 40, CPU41 of the program information system 40 will transmit the reservation-of-picture-recording command of the viewing-and-listening schedule program specified by the user to the videotape recorder 20 according to this. The videotape recorder 20 receives the reservation-of-picture-recording command transmitted from the program information system 40 with the modem 24, and carries out automatic video recording of the viewing-and-listening schedule program specified by the user.

[0030]According to the above composition, the program information system 40 generates electronic program guide EPG based on the broadcast schedule of a program, According to the viewing-and-listening schedule program information InfW which the user specified using the electronic program guide EPG concerned, Program notice mail can be transmitted to the personal computer 50, a failure of a viewing-and-listening schedule program to see can be prevented by transmitting a reservation-of-picture-recording command to the videotape recorder 20, or failure in the video recording by change of broadcasting hours

can be prevented.

[0031]In an above-mentioned embodiment, although the program information system 40 transmitted the notice of broadcast of the viewing-and-listening schedule program to the personal computer 50 using the E-mail, It may be made for this invention to transmit the notice of broadcast of a viewing-and-listening schedule program not only to this but to a pager (pager), a cellular phone, etc. which a user owns, for example.

[0032]In an above-mentioned embodiment, although the program information system 40 transmitted the reservation-of-picture-recording command to the videotape recorder 20 according to the reply of the program 1 ** mail by a user, It may be made for this invention to transmit a reservation-of-picture-recording command to the videotape recorder 20, corresponding [not only this but] to the viewing-and-listening schedule program information InfW for example.

[0033]Although the modem 24 is formed in the videotape recorder 20 and the reservation-of-picture-recording command was received via the modem 24 concerned in the above-mentioned embodiment, This invention connects not only this but a video control device connectable with the Internet, for example to the videotape recorder 20, The video control device concerned receives a reservation-of-picture-recording command, the videotape recorder 20 is controlled according to the received reservation-of-picture-recording command concerned, and it may be made to record a viewing-and-listening schedule program.

[0034]Although a user searches a program using electronic program guide EPG, the program which plans viewing and listening is specified in a further above-mentioned embodiment and it was made to transmit to the program information system 40, the tendency (for example, a movie.) of the program of liking [this invention / not only this but a user] News, a sport, etc. are beforehand registered into the program information system 40, and a user searches the program which suited the tendency of the favorite program, and it may be made for the program information system 40 to notify a user of the searched program concerned.

[0035]

[Effect of the Invention]According to this invention, based on the broadcast schedule of a program, an electronic program guide is generated as mentioned above, The user can view based on the information on a user's program wishing viewing and listening specified using the electronic program guide concerned and listen to a desired program certainly by having notified the broadcast start of the program wishing viewing and listening to the user.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention]This invention is applied to the broadcast notifying device which notifies the broadcast start of a television program, concerning a broadcast notifying device and a broadcast notifying method, and is preferred.

[Translation done.]

* NOTICES *

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art]When a televiewer views and listens to a television program conventionally, a televiewer looks for a desired program using broadcast schedule tables, such as the newspaper TV program column and a television information magazine, first, and memorizes the broadcasting date and channel of a program of the request concerned. And it can view and listen to a desired program by seeing the channel memorized to the memorized broadcasting date.

[Translation done.]

* NOTICES *

EFFECT OF THE INVENTION

[Effect of the Invention]As mentioned above, by this invention, an electronic program guide is generated based on the broadcast schedule of a program, and the broadcast start of the program wishing viewing and listening was notified to the user based on the information on a user's program wishing viewing and listening specified using the electronic program guide concerned.

Therefore, the user can view and listen to a desired program certainly.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]However, there was a problem that he might forget the memorized broadcasting date or a desired program might be overlooked by change of the broadcasting hours by broadcast of an extraordinary program, etc.
[0004]Even if it set up the reservation of picture recording of the videotape recorder based on the broadcasting date and channel which were memorized, there was a problem that the recording of a desired program might go wrong by change of broadcasting hours.
[0005]This invention was made in consideration of the above point, and tends to propose the broadcast notifying device and broadcast notifying method with which a user may enable it to view and listen to a desired program certainly.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem]In [in order to solve this technical problem] this invention, A transmitting means which transmits a notice of broadcast which was specified as an electronic program guide creating means which generates an electronic program guide based on a broadcast schedule of a program using an electronic program guide, and which notifies a broadcast start of a program wishing viewing and listening to a user based on information on a user's program wishing viewing and listening was established.

[0007]By transmitting to a user a notice of broadcast which notifies a broadcast start of a program wishing viewing and listening, the user can view and listen to a desired program certainly.

[0008]

[Embodiment of the Invention]The 1 embodiment of this invention is explained in full detail about a drawing below.

[0009]The broadcasting station 10 which 1 shows the broadcasting system by this invention as a whole, and performs television broadcasting in <u>drawing 1</u>, the videotape recorder which receives and records the television broadcasting concerned via the antenna 70. (Hereafter) This. 20 called VTR, the program information system 40 which generates electronic program guide EPG (Electric Program Guide) of HTML (HyperText Markup Language) form based on the program broadcast schedule supplied from the broadcasting station 10, It comprises the personal computer 50.

[0010]The videotape recorder 20 and the personal computer 50 are connected to the program information system 40 via the Internet 30. The videotape recorder 20 is made as [operate / from the exterior / the videotape recorder 20 concerned] while being made as [communicate / with the exterior / it / via the Internet etc.]. Although the explanation top videotape recorder 20 and the personal computer 50 are accepted one and illustrated, respectively, two or more videotape recorders 20 and personal computers 50 are connected to the program information system 40 via the Internet etc. in practice.

[0011]The broadcasting station 10 transmits the television program based on the program broadcast schedule information InfB defined beforehand as the broadcast wave S10.

[0012]The program information system 40, CPU(Central Processing Unit) 41, the hard disk 42, the modem 43, RAM(Randam Access Memory) 44, and ROM(Read Only Memoly) 45 have the composition connected to the bus 46. CPU41 controls the program information system 40 whole by reading the control program

stored in ROM45, and developing and performing this to RAM44.

[0013]The program information system 40 acquires the program broadcast schedule information InfB from the broadcasting station 10 via the modem 43, and stores it in the hard disk 42. CPU41 [and] as an electronic program guide creating means, Electronic program guide EPG (Electric Program Guide) of HTML (HyperText Markup Language) form is generated using the program broadcast schedule information InfB, and this is stored in the hard disk 42.

[0014]On the other hand, the personal computer 50 has the composition in which CPU51, the hard disk 52, RAM53, ROM54, the modem 55, the operation input section 56, and the indicator 57 were connected to the bus 58. CPU51 performs various processings by reading the control program stored in the hard disk 52, and developing and performing this to RAM53.

[0015]When using the broadcast interception of calls service by this invention, a user operates the personal computer 50, connects with the program information system 40, displays electronic program guide EPG on the indicator 50, and gets to know the program broadcast schedule of the broadcasting station 10.

[0016]That is, a user inputs the start manipulation of a web browser program using the operation input section 56 first. According to the start manipulation concerned, CPU51 reads a web browser program from the hard disk 52, executes it on RAM53, and displays a browser picture on the indicator 57.

[0017]A user accesses the program information system 40 using a web browser program. Namely, if a user inputs URL (Uniform Resource Locator) of the program information system 40 into the personal computer 50, CPU51 transmits the read-out demand to the program information system 40 via the modem 55 and the Internet 30 according to this. According to the read-out demand from the personal computer 50, the program information system 40 reads electronic program guide EPG from the hard disk 52, and transmits to the personal computer 50. It receives via the modem 55 and the personal computer 50 displays electronic program guide EPG on the indicator 57.

[0018]A user searches a program using electronic program guide EPG displayed on the indicator 57, and specifies the program which plans viewing and listening on electronic program guide EPG. CPU51 transmits each information on the channel of a viewing-and-listening schedule program, broadcast start time, and broadcast finish time to the program information system 40 as the viewing-and-listening schedule program information InfW according to the program specification by a user. The program information system 40 receives the viewing-and-listening schedule program information InfW, and stores it in the hard disk 52.

[0019]Here, the user sets program reporting timing as the program information system 40 beforehand. The program information system 40 is the timing which transmits program notice mail to a user, for example, this program reporting timing can set up arbitrary timing, such as 1 hour before the broadcast start of a viewing-and-listening schedule program, on the morning of the broadcasting day of a viewing-and-listening schedule program.

[0020]Based on the viewing-and-listening schedule program information InfW, CPU41 as a transmitting means is the timing set up by program reporting timing, and transmits the program notice mail which is an E-mail which notifies broadcast of a viewing-and-listening schedule program to the personal computer 50.

By receiving this program notice mail with the personal computer 50, the user can check a viewing-and-listening schedule program, and, thereby, can prevent a failure of the viewing-and-listening schedule program concerned to see.

[0021]The program information system 40 repeats acquisition of the program broadcast schedule information InfB from the broadcasting station 10 for every predetermined time interval. And when there is change to the broadcast times of a viewing-and-listening schedule program, based on the changed broadcast times, program notice mail is again transmitted to the personal computer 50. For this reason, also when the broadcast schedule of a program is changed, for example by extension of baseball broadcast, etc., the user can get the program notice mail based on the changed broadcast schedule concerned.

[0022]In this broadcasting system 1, automatic video recording of the desired program can be carried out with the videotape recorder 20 by replying the program notice mail which the user received to the program information system 40.

[0023]That is, a user operates the personal computer 50 and replies the program notice mail transmitted from the program information system 40 to the program information system 40 as it is. CPU41 of the program information system 40 analyzes the replied program notice mail, and transmits the reservation-of-picture-recording command of a viewing-and-listening schedule program to the videotape recorder 20 beforehand registered by the user.

[0024]The videotape recorder 20 has the recording reproduction section 23 which performs record and reproduction of the control section 21 which controls the videotape recorder 20 whole concerned, the receive section 22 which receives the broadcast wave S10 via the antenna 70, and the received broadcast, and the modem 24 which performs communication with the exterior.

[0025]The videotape recorder 20 receives the reservation-of-picture-recording command transmitted from the program information system 40 with the modem 24, and supplies it to the control section 21. The control section 21 controls the recording reproduction section 23 according to a reservation-of-picture-recording command, and records automatically the viewing-and-listening schedule program specified by the user.

[0026]In this case, the personal computer 50 and the videotape recorder 20 may be installed in the distant place, For example, the user can perform program retrieving using the personal computer 50 installed in the company of office, and can perform reservation of picture recording of the videotape recorder 20 installed in the house.

[0027]In the above composition, the program information system 40 acquires the program broadcast schedule information InfB from the broadcasting station 10 for every predetermined time, and generates electronic program guide EPG based on this. A user acquires electronic program guide EPG from the program information system 40 using the personal computer 50, and specifies the program which plans viewing and listening on electronic program guide EPG. CPU51 of the personal computer 50 transmits to the program information system 40 according to the program specification by a user by making each information on the channel of a viewing-and-listening schedule program, broadcast start time, and broadcast finish time into the viewing-and-listening schedule program information InfW.

[0028]Based on the viewing-and-listening schedule program information InfW, CPU41 of the program information system 40 is the timing set up by program reporting timing, and transmits the program notice mail to a user to the personal computer 50. By receiving this program notice mail with the personal computer 50, a user checks a viewing-and-listening schedule program, and can prevent that this forgets to see the viewing-and-listening schedule program concerned.

[0029]If a user replies the received program notice mail to the program information system 40, CPU41 of the program information system 40 will transmit the reservation-of-picture-recording command of the viewing-and-listening schedule program specified by the user to the videotape recorder 20 according to this. The videotape recorder 20 receives the reservation-of-picture-recording command transmitted from the program information system 40 with the modem 24, and carries out automatic video recording of the viewing-and-listening schedule program specified by the user.

[0030]According to the above composition, the program information system 40 generates electronic program guide EPG based on the broadcast schedule of a program, According to the viewing-and-listening schedule program information InfW which the user specified using the electronic program guide EPG concerned, Program notice mail can be transmitted to the personal computer 50, a failure of a viewing-and-listening schedule program to see can be prevented by transmitting a reservation-of-picture-recording command to the videotape recorder 20, or failure in the video recording by change of broadcasting hours can be prevented.

[0031]In an above-mentioned embodiment, although the program information system 40 transmitted the notice of broadcast of the viewing-and-listening schedule program to the personal computer 50 using the E-mail, It may be made for this invention to transmit the notice of broadcast of a viewing-and-listening schedule program not only to this but to a pager (pager), a cellular phone, etc. which a user owns, for example.

[0032]In an above-mentioned embodiment, although the program information system 40 transmitted the reservation-of-picture-recording command to the videotape recorder 20 according to the reply of the program 1 ** mail by a user, It may be made for this invention to transmit a reservation-of-picture-recording command to the videotape recorder 20, corresponding [not only this but] to the viewing-and-listening schedule program information InfW for example.

[0033]Although the modem 24 is formed in the videotape recorder 20 and the reservation-of-picture-recording command was received via the modem 24 concerned in the above-mentioned embodiment, This invention connects not only this but a video control device connectable with the Internet, for example to the videotape recorder 20, The video control device concerned receives a reservation-of-picture-recording command, the videotape recorder 20 is controlled according to the received reservation-of-picture-recording command concerned, and it may be made to record a viewing-and-listening schedule program.

[0034]Although a user searches a program using electronic program guide EPG, the program which plans viewing and listening is specified in a further above-mentioned embodiment and it was made to transmit to the program information system 40, the tendency (for example, a movie.) of the program of liking [this invention / not only this but a user] News, a sport, etc. are beforehand registered into the program information system 40, and a user searches the program which suited the tendency of the favorite

program, and it may be made for the program information system 40 to notify a user of the searched program concerned.

[Translation done.]

* NOTICES *

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a block diagram showing the composition of the broadcasting system by this invention.
[Description of Notations]
1 .... A broadcasting system, 10 .... A broadcasting station, 20 .... Videotape recorder, 21 [.... Modem,] ....
A control section, 22 .... A receive section, 23 .... A recording reproduction section, 24 30 .... The Internet,
40 .... A program information site, 41 .... CPU, 42 [.... ROM,] .... A hard disk, 43 .... A modem, 44 .... RAM,
45 46 [.... A hard disk, 53 / .... RAM, 54 / .... ROM, 55 / .... A modem, 56 / .... An operation input section,
57 / .... An indicator, 58 / .... Bus.] .... A bus, 50 .... A personal computer, 51 .... CPU, 52

[Translation done.]

(51)Int.Cl.⁷		識別記号			ＦＩ				テーマコード（参考）
Ｈ０４Ｎ	7/173		６４０		Ｈ０４Ｎ	7/173		６４０Ａ	５Ｃ０１８
	5/445					5/445		Ｚ	５Ｃ０２５
	5/7826					5/782		Ｚ	５Ｃ０６４

(54)【発明の名称】　放送通知装置及び放送通知方法

(57)【要約】

【課題】ユーザが所望の番組を確実に視聴できるように
し得る放送通知装置を得る。

【解決手段】番組の放送予定に基づいて電子番組表を生
成する電子番組表生成手段と、電子番組表を用いて指定
された、ユーザの視聴希望番組の情報に基づいて、ユー
ザに対して当該ユーザの視聴希望番組の放送開始を通知
する放送通知を送信する送信手段とを設けた。

図1　本発明による放送システム
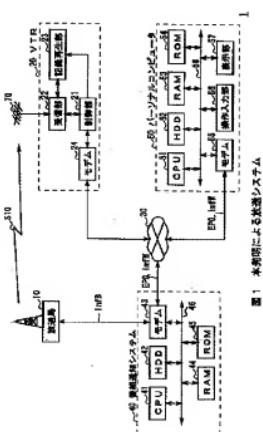
【特許請求の範囲】

【請求項1】番組の放送予定に基づいて電子番組表を生成する電子番組表生成手段と、

上記電子番組表を用いて指定された、ユーザの視聴希望番組の情報に基づいて、上記ユーザに対して上記視聴希望番組の放送開始を通知する放送通知を送信する送信手段とを具えることを特徴とする放送通知装置。

【請求項2】上記送信手段は、所定のメールアドレスに電子メールを送信することにより上記放送通知を送信することを特徴とする請求項1記載の放送通知装置。

【請求項3】上記送信手段は、所定のポケットベルに対してメッセージを送信することにより上記放送通知を送信することを特徴とする請求項1記載の放送通知装置。

【請求項4】上記送信手段は、所定の電話番号に対してメッセージを送信することにより上記放送通知を送信することを特徴とする請求項1記載の放送通知装置。

【請求項5】上記送信手段は、所定の映像記録装置に対して上記視聴希望番組の録画命令を送信することを特徴とする請求項1記載の放送通知装置。

【請求項6】上記送信手段は、上記番組の放送予定が変更されたとき、これに応じて再度放送通知を送信することを特徴とする請求項1記載の放送通知装置。

【請求項7】番組の放送予定に基づいて電子番組表を生成する電子番組表生成ステップと、

上記電子番組表を用いて指定された、ユーザの視聴希望番組の情報に基づいて、上記ユーザに対して上記視聴希望番組の放送開始を通知する放送通知を送信する送信ステップとを具えることを特徴とする放送通知方法。

【請求項8】上記送信ステップは、所定のメールアドレスに電子メールを送信することにより上記放送通知を送信することを特徴とする請求項7記載の放送通知方法。

【請求項9】上記送信ステップは、所定のポケットベルに対してメッセージを送信することにより上記放送通知を送信することを特徴とする請求項7記載の放送通知方法。

【請求項10】上記送信ステップは、所定の電話番号に対してメッセージを送信することにより上記放送通知を送信することを特徴とする請求項7記載の放送通知方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】本発明は放送通知装置及び放送通知方法に関し、例えばテレビジョン番組の放送開始を通知する放送通知装置に適用して好適なものである。

【0002】

【従来の技術】従来、視聴者がテレビジョン番組を視聴する場合、視聴者はまず新聞のテレビ番組欄やテレビ情報雑誌等の放送予定表を用いて所望の番組を探し、当該

所望の番組の放送日時及びチャンネルを記憶する。そして、記憶した放送日時に記憶したチャンネルを見ることにより、所望の番組を視聴することができる。

【0003】

【発明が解決しようとする課題】ところが、記憶した放送日時を忘れたり、臨時番組の放送等による放送時間の変更によって、所望の番組を見逃すことがあるという問題があった。

【0004】また、記憶した放送日時及びチャンネルに基づいてビデオテープレコーダの録画予約を設定しても、放送時間の変更によって所望の番組の録画に失敗することがあるという問題があった。

【0005】本発明は以上の点を考慮してなされたもので、ユーザが所望の番組を確実に視聴できるようにし得る放送通知装置及び放送通知方法を提案しようとするものである。

【0006】

【課題を解決するための手段】かかる課題を解決するため本発明においては、番組の放送予定に基づいて電子番組表を生成する電子番組表生成手段と、電子番組表を用いて指定された、ユーザの視聴希望番組の情報に基づいて、ユーザに対して視聴希望番組の放送開始を通知する放送通知を送信する送信手段を設けた。

【0007】視聴希望番組の放送開始を通知する放送通知をユーザに送信することにより、ユーザは確実に所望の番組を確実に視聴することができる。

【0008】

【発明の実施の形態】以下図面について本発明の一実施の形態を詳述する。

【0009】図1において、1は全体として本発明による放送システムを示し、テレビジョン放送を行う放送局10、当該テレビジョン放送をアンテナ70を介して受信し録画するビデオテープレコーダ（以下、これをVTRと呼ぶ）20、放送局10から供給される番組放送予定に基づいてHTML（HyperText Markup Language）形式の電子番組表EPG（Electric Program Guide）を生成する番組通知システム40、パーソナルコンピュータ50で構成される。

【0010】ビデオテープレコーダ20及びパーソナルコンピュータ50は、インターネット30を介して番組通知システム40に接続されている。またビデオテープレコーダ20はインターネット等を介して外部と通信し得るようになされているとともに、外部から当該ビデオテープレコーダ20を操作し得るようになされている。また説明上ビデオテープレコーダ20及びパーソナルコンピュータ50は1つのみ図示しているが、実際上は複数のビデオテープレコーダ20及びパーソナルコンピュータ50がインターネットを介して番組通知システム40に接続されている。

【0011】放送局10は、予め定められた番組放送予定情報ＩｎｆＢに基づくテレビジョン番組を、放送波Ｓ10として送信する。

【0012】番組通知システム40は、ＣＰＵ（Central Processing Unit）41、ハードディスク42、モデム43、ＲＡＭ（Random Access Memory）44及びＲＯＭ（Read Only Memoly）45がバス46に接続された構成を有している。ＣＰＵ41は、ＲＯＭ45に格納されている制御プログラムを読み出し、これをＲＡＭ44に展開して実行することにより、番組通知システム40全体を制御する。

【0013】番組通知システム40は、モデム43を介して放送局10から番組放送予定情報ＩｎｆＢを取得し、ハードディスク42に格納する。そして、電子番組表生成手段としてのＣＰＵ41は、番組放送予定情報ＩｎｆＢを用いてＨＴＭＬ（HyperText Markup Language）形式の電子番組表ＥＰＧ（Electric Program Guide）を生成し、これをハードディスク42に格納する。

【0014】一方パーソナルコンピュータ50は、ＣＰＵ51、ハードディスク52、ＲＡＭ53、ＲＯＭ54、モデム55、操作入力部56及び表示部57がバス58に接続された構成を有している。ＣＰＵ51は、ハードディスク52に格納されている制御プログラムを読み出し、これをＲＡＭ53に展開して実行することにより、種々の処理を行う。

【0015】本発明による放送通知サービスを利用する場合、ユーザはパーソナルコンピュータ50を操作して番組通知システム40に接続し、電子番組表ＥＰＧを表示部50に表示させ、放送局10の番組放送予定を知る。

【0016】すなわち、まずユーザは操作入力部56を用いてウェブブラウザプログラムの起動操作を入力する。ＣＰＵ51は当該起動操作に応じて、ウェブブラウザプログラムをハードディスク52から読み出してＲＡＭ53上で実行し、ブラウザ画面を表示部57に表示する。

【0017】ユーザはウェブブラウザプログラムを用いて、番組通知システム40にアクセスする。すなわちユーザが番組通知システム40のＵＲＬ（Uniform Resource Locator）をパーソナルコンピュータ50に入力すると、ＣＰＵ51はこれに応じて番組通知システム40に対する読出要求をモデム55及びインターネット30を介して送信する。番組通知システム40はパーソナルコンピュータ50からの読出要求に応じて、電子番組表ＥＰＧをハードディスク52から読み出してパーソナルコンピュータ50に送信する。パーソナルコンピュータ50は、電子番組表ＥＰＧをモデム55を介して受信し、表示部57に表示する。

【0018】ユーザは表示部57に表示された電子番組表ＥＰＧを用いて番組を検索し、視聴を予定する番組を

電子番組表ＥＰＧ上で指定する。ＣＰＵ51はユーザによる番組指定に応じて、視聴予定番組のチャンネル、放送開始時刻及び放送終了時刻の各情報を、視聴予定番組情報ＩｎｆＷとして番組通知システム40に送信する。番組通知システム40は視聴予定番組情報ＩｎｆＷを受信してハードディスク52に格納する。

【0019】ここで、ユーザは予め番組通知タイミングを番組通知システム40に設定しておく。かかる番組通知タイミングは、番組通知システム40がユーザに番組通知メールを送信するタイミングであり、例えば視聴予定番組の放送日の朝、視聴予定番組の放送開始の1時間前等、任意のタイミングを設定することができる。

【0020】送信手段としてのＣＰＵ41は、視聴予定番組情報ＩｎｆＷに基づいて、番組通知タイミングで設定されたタイミングで、視聴予定番組の放送を通知する電子メールである番組通知メールをパーソナルコンピュータ50に送信する。ユーザはこの番組通知メールをパーソナルコンピュータ50で受信することにより、視聴予定番組を確認することができ、これにより当該視聴予定番組の見忘れを防止できる。

【0021】また番組通知システム40は、所定時間間隔毎に放送局10から番組放送予定情報ＩｎｆＢの取得を繰り返す。そして視聴予定番組の放送時刻に変更があった場合、変更された放送時刻に基づいて、再度番組通知メールをパーソナルコンピュータ50に送信する。このため、例えば野球放送の延長等によって番組の放送予定が変更された場合でも、当該変更された放送予定に基づいた番組通知メールを得ることができる。

【0022】また、この放送システム1においては、ユーザが受信した番組通知メールを番組通知システム40に返信することにより、所望の番組をビデオテープレコーダ20で自動録画することができる。

【0023】すなわちユーザはパーソナルコンピュータ50を操作し、番組通知システム40から送信された番組通知メールをそのまま番組通知システム40に返信する。番組通知システム40のＣＰＵ41は返信された番組通知メールを解析し、ユーザによって登録されたビデオテープレコーダ20に対して、視聴予定番組の録画予約命令を送信する。

【0024】ビデオテープレコーダ20は、当該ビデオテープレコーダ20全体を制御する制御部21、放送波Ｓ10をアンテナ70を介して受信する受信部22、受信した放送の記録及び再生を行う記録再生部23、及び外部との通信を行うモデム24を有している。

【0025】ビデオテープレコーダ20は、番組通知システム40から送信された録画予約命令をモデム24で受信し、制御部21に供給する。制御部21は録画予約命令に応じて記録再生部23を制御し、ユーザによって指定された視聴予定番組を自動的に録画する。

【0026】この場合、パーソナルコンピュータ50と

ビデオテープレコーダ20とは離れた場所に設置されていてもよく、例えばユーザは勤務先の会社に設置されたパーソナルコンピュータ50を用いて番組検索を行い、自宅に設置されたビデオテープレコーダ20の録画予約を行うことができる。

【0027】以上の構成において、番組通知システム40は放送局10から所望時間毎に電子放送予定情報InfBを取得し、これに基づいて電子番組表EPGを生成する。ユーザはパーソナルコンピュータ50を用いて番組通知システム40から電子番組表EPGを取得し、視聴を予定する番組を電子番組表EPG上で指定する。パーソナルコンピュータ50のCPU51はユーザによる番組指定に応じて、視聴予定番組のチャンネル、放送開始時刻及び放送終了時刻の各情報を視聴予定番組情報InfWとして番組通知システム40に送信する。

【0028】番組通知システム40のCPU41は視聴予定番組情報InfWに基づいて、番組通知タイミングで設定されたタイミングで、ユーザに対する番組通知メールをパーソナルコンピュータ50に送信する。ユーザはこの番組通知メールをパーソナルコンピュータ50で受信することにより視聴予定番組を確認し、これにより当該視聴予定番組を見忘れることを防止できる。

【0029】また、受信した番組通知メールをユーザが番組通知システム40に返信すると、番組通知システム40のCPU41はこれに応じて、ビデオテープレコーダ20に対して、ユーザによって指定された視聴予定番組の録画予約命令を送信する。ビデオテープレコーダ20は、番組通知システム40から送信された録画予約命令をモデム24で受信し、ユーザによって指定された視聴予定番組を自動録画する。

【0030】以上の構成によれば、番組通知システム40は番組の放送予定に基づいて電子番組表EPGを生成し、ユーザが当該電子番組表EPGを用いて指定した視聴予定番組情報InfWに応じて、パーソナルコンピュータ50に対して番組通知メールを送信することにより、視聴予定番組の見忘れを防止したり、放送時間の変更によるビデオ録画の失敗を防止することができる。

【0031】なお上述の実施の形態においては、番組通知システム40が電子メールを用いて視聴予定番組の放送通知をパーソナルコンピュータ50に送信するようにしたが、本発明はこれに限らず、例えばユーザの所有するポケットベル（ページャ）や携帯電話等に対して視聴予定番組の放送通知を送信するようにしてもよい。

【0032】また上述の実施の形態においては、番組通知システム40はユーザによる番組1каメールの送信に応じて、ビデオテープレコーダ20に録画予約命令を送信するようにしたが、本発明はこれに限らず、例えば視聴予定番組情報InfWに応じてビデオテープレコーダ20に録画予約命令を送信するようにしてもよい。

【0033】また上述の実施の形態においては、ビデオテープレコーダ20にモデム24を設け、当該モデム24を介して録画予約命令を受信するようにしたが、本発明はこれに限らず、例えばインターネットに接続可能なビデオ制御装置をビデオテープレコーダ20に接続し、当該ビデオ制御装置で録画予約命令を受信し、当該受信した録画予約命令に応じてビデオテープレコーダ20を制御して視聴予定番組を録画するようにしてもよい。

【0034】さらに上述の実施の形態においては、ユーザは電子番組表EPGを用いて番組を検索し、視聴を予定する番組を指定して番組指定をシステム40に送信するようにしたが、本発明はこれに限らず、例えばユーザが好みの番組の傾向（例えば映画、ニュース、スポーツ等）を予め番組通知システム40に登録しておき、番組通知システム40がユーザが好みの番組の傾向に適合した番組を検索し、当該検索された番組をユーザに通知するようにしてもよい。

【0035】
【発明の効果】上述のように本発明によれば、番組の放送予定に基づいて電子番組表を生成し、当該電子番組表を用いて指定されたユーザの視聴希望番組の情報に基づいて、ユーザに対して視聴希望番組の放送通知を通知するようにしたことにより、ユーザは確実に所望の番組を確実に視聴することができる。

【図面の簡単な説明】
【図1】本発明による放送システムの構成を示すブロック図である。
【符号の説明】
1……放送システム、10……放送局、20……ビデオテープレコーダ、21……制御部、22……受信部、23……記録再生部、24……モデム、30……インターネット、40……番組情報サイト、41……CPU、42……ハードディスク、43……モデム、44……RAM、45……ROM、46……バス、50……パーソナルコンピュータ、51……CPU、52……ハードディスク、53……RAM、54……ROM、55……モデム、56……操作入力部、57……表示部、58……バス。

【図1】
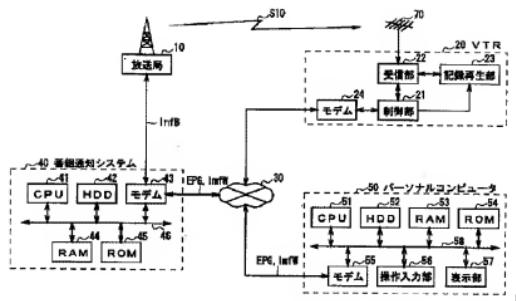
図1　本発明による放送システム

フロントページの続き

(72)発明者　川口　大介
　　　東京都品川区北品川６丁目７番35号ソニー
　　　株式会社内
(72)発明者　吉田　英喜
　　　東京都品川区北品川６丁目７番35号ソニー
　　　株式会社内